

**ABSTRACT**

A method for forming a field effect transistor includes: forming a conductive region on an isolation layer formed on a substrate, and a cap dielectric layer on the conductive region; forming a sacrificial dielectric layer over the isolation layer and the cap dielectric layer, and on sidewalls of the conductive region; removing a portion of the sacrificial dielectric layer on the cap dielectric layer; removing the cap dielectric layer; removing remaining portions of the sacrificial dielectric layer; forming a gate on the conductive region; and forming source/drain (S/D) regions within the conductive region and adjacent to the gate. A field effect transistor includes a conductive region over an isolation layer formed on a substrate, the conductive region being substantially without undercut at the region within the isolation layer beneath the conductive region; a gate on the conductive region; and S/D regions within the conductive region and adjacent to the gate.